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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.		
10/586,139	07/17/2006	Dan Kuylenstierna	3670-72	3811		
23117	7590	04/30/2008	EXAMINER			
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				LEE, BENNY T		
ART UNIT		PAPER NUMBER				
2817						
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/586,139	KUYLENSTIerna ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Benny Lee	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 17 July 2006.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1 and 7 is/are rejected.
- 7) Claim(s) 2-6 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 17 July 2006 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>17 July 2006</u>  | 6) <input type="checkbox"/> Other: _____                          |

The disclosure is objected to because of the following informalities: Note that at the following occurrences, should “tuneable” be correctly spelled as --tunable--: page 1, lines 18, 19, 23; page 2, line 28. Page 1, in the heading, note that “DISCLOSURE” should be rewritten as –SUMMARY-- for consistency with PTO guidelines. Page 2, line 8; page 3, line 24; page 6, line 1: note that “imagined” should be rewritten as --imaginary-- for an appropriate characterization. Page 2, line 23, note that “Fig. 5 shows” should be rephrased as --Figs. 5a, 5b and 5c show-- for an appropriate characterization; line 25, note that the brief description of “Figs. 7-12” should be rewritten to provide brief descriptions of the individual drawing figures in this sequence; line 27, note that “EMBODIMENTS” should be rephrased as --DETAIL DESCRIPTION OF THE INVENTION-- for consistency with PTO guidelines. Page 3, line 20, note that “Reverting” should be rewritten as --Returning-- for an appropriate characterization. Page 4, line 23, note that “(?)” is vague in meaning and needs clarification; line 31, note that --(see Fig. 4)-- should be inserted after “350” for consistency with the labeling in that drawing figure. Page 5, line 7, note that --(see Fig. 3)-- should be inserted after “A/B” for consistency with the labeling in Fig. 3; line 31, note that “which” should be rephrased as --where the-- for clarity of description. Page 6, line 1, note that “said imagined” should be rephrased as --the imaginary-- for an appropriate characterization; line 18, note that “IV-IV” should correctly be --VI-VI--. Page 7, line 1, note that “figs. 1-6” should be rewritten as --figs. 1-4, 5a-5c and 6-- for consistency with the numbering of those drawings; line 9, note that ”first 710” should be rephrased as --first conducting pattern 710-- for clarity of description; line 13, note that “721” should correctly be --721-- for consistency with the labeling in the drawing figure; line 22, note that “second 712 and third 711 direction of extension” should be rephrased as –second direction of extension 712 and

third direction of extension 711--for clarity of description; lines 24, 25, note that “third direction 713 of extension” should be rephrased as --third direction of extension 711-- for clarity of description; lines 29, 30, note that “fourth 713 and a fifth 714 direction of extension” should be rephrased as --fourth direction of extension 713 and a fifth direction of extension 714-- for clarity of description. Page 8, line 5, note that “first 710 and second 720 conductors” should be rephrased as --first and second conductors 710 & 720-- for clarity of description; line 10, note that “fifth 714 direction of extension” should be rephrased as --fifth direction of extension 714-- for clarity of description. Page 8 line 18 & page 9, line 15, note that “figs. 1-8” and “Figs. 7-11” should be rewritten as --figs. 1-4, 5a-5c, 6-8-- and --figs. 7-10, 11a and 11b--, respectively for consistency with the numbering of those drawing figures. Page 9, line 17, note that --of Fig.-- should be inserted prior to “12a” & “12b”, respectively for clarity of description; line 27, note that “said” should be rewritten as --the-- for an appropriate characterization. Note that the following reference labels appearing in the noted drawing figures needs a corresponding description in the specification description of that drawing figure: Fig. 1 “130”; Figs. 2, 4 (+, -); Figs.3, 8, “C”; Fig. 3 “330”; Fig. 5c “530”; Fig. 6 (500, 505); Figs. 7, 8, 10 (90°). Appropriate correction is required.

The drawings are objected to because of the following: In Fig. 3, note that lines --III-III-- & --IV-IV-- need to be provided such as to be consistent with the specification description; In Fig. 6, note that reference label --510-- needs to be provided for consistency with the description in Fig. 6; In Fig. 7, note that reference symbols --(α, β α', β')-- need to be provided.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing

sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 7, note that “the third conductor” lacks strict antecedent basis in it’s dependency from claim 4. Note that reference to the “third conductor” appears only in claim 3 in which this claim does not depend from.

The following claims have been found to be objectionable for reasons set forth below:

In claim 1, line 1, note that “tuneable” should be correctly spelled as --tunable--; line 5, note that “which” should be rewritten as --said-- for an appropriate characterization; line 11, note that “imagined” should be rewritten as --imaginary-- for an appropriate characterization.

In claim 4, last line, note that “ferroelectric layer’s main surface” should be rephrased as --the main surfaces of the ferroelectric layer-- for an appropriate characterization.

In claim 5, line 2, note that “first conductor’s second direction” should be rephrased as --second direction of the first conductor-- for an appropriate characterization; third line, note that “first conductor’s third direction” should be rephrased as --third direction of the first conductor-- for an appropriate characterization.

In claim 6, lines 3, 5 & claim 7, line 3, note that “first conductor’s section” should be rephrased as --sections of the first conductor-- for an appropriate characterization.

In claim 6, lines 4, 5, 6, note that “second conductor’s sections” should be rephrased as --sections of the second conductor-- for an appropriate characterization.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by either Jiang et al or Das (cited by applicants').

Note that Jiang et al (Fig. 6d) or Das (Fig. 7) discloses a delay line configuration comprising: a first conductor (e.g. 9 in Das; 107 in Jiang et al) and a second conductor (e.g. 12 in das; 108 in Jiang et al) being arranged on top of a substrate (e.g. 15 in Fig. 2 of Das; 106 in Jiang et al); an ferroelectric layer (e.g. 14 in Das; 103 in Jiang et al) is configured to be interposed between the substrate and the first and second conductors. Note that in each reference, the first and second conductors are each aligned to be parallel to each other along a direction of

extension, such that the parallel orientation causes such directions of extension to coincide (i.e. by virtue of the parallel alignment). Also, note that by virtue of the parallel alignment of the conductors along with linear shape of the first and second conductors, such an alignment results in the conductors being “mirror image” along a centrally located line of symmetry. Finally, note that in operation, bias voltages must necessarily be applied across the first and second conductors to thereby bias the ferroelectric layer and thus resulting in a tunable delay line configuration.

Claims 2-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pchelnikov et al discloses a delay line including plural meander or plural angled conductors.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 571 272 1764.

**/BENNY LEE/  
PRIMARY EXAMINER  
ART UNIT 2817**

B. Lee